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Forest Service  
APPALACHIAN FOREST EXPERIMENT STATION

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EXPERIMENT STATION

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EFFECTIVE RANGE OF LOOKOUT OBSERVERS IN THE SOUTHERN APPALACHIANS  
SHOWN BY HAZE METER READINGS

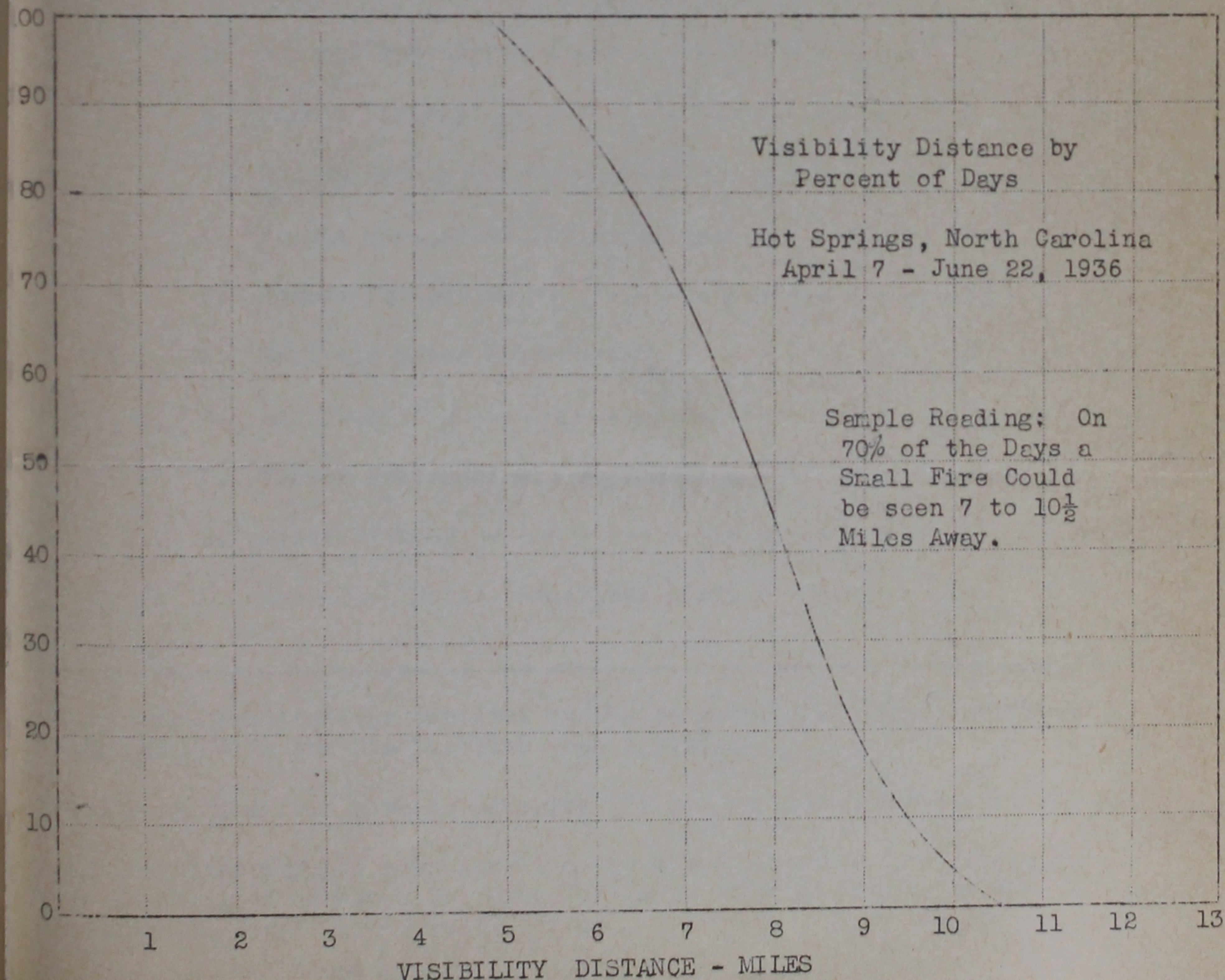
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By C. A. Abell

Within the past 2 years, the Byram Haze Meter (described Jour. For. April, 1935), an instrument for measuring the visibility distance of small smokes has been produced on Eastern National Forests. Increased use of this instrument has promoted issuance of the following data to illustrate the results being obtained.

During the period April 7 to June 22, 1936, two Byram haze meters were read twice daily from two lookout towers on the French Broad Division, Pisgah National Forest, near Hot Springs, North Carolina. At noon and at four p.m., each observer took readings in four directions. Curves of visibility distance on per cent of days were drawn separately for each observer and each time of day. These four curves were so similar that all readings for noon and four p.m. for both observers were combined into a single curve.

This curve, shown below, gives the percent of days on which the observers could see small smokes (equivalent to about a 12 x 12 ft. fire in hardwood leaves) at various distances. Attention is called to the fact that this curve represents the effective range of lookouts only at a particular place and for a definite period.



Basis: 1700 Byram Haze Meter Readings (corrected).